



**State of New Jersey** February 24, 2016

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Jennifer LaPoma  
U.S. Environmental Protection Agency (USEPA)  
Region II Headquarters  
290 Broadway, 19<sup>th</sup> Floor East  
New York, NY 10007-1866

Re: Passaic River Study Area – 17 Mile Project  
Newark City, Essex  
SRP PI# 332799  
Activity Number Reference: RPC030001

Dear Ms. LaPoma:

The New Jersey Department of Environmental Protection (Department) has completed a review of the Revised Draft Baseline Human Health Risk Assessment for the Lower Passaic River Study Area (LPRSA) for River Mile 17 dated December 2015, submitted pursuant to CERCLA. This letter provides an update to Anne Hayton's email to the USEPA on February 18, 2016. The Department's comments on the submittal are provided below.

## **I Summary**

The Department reviewed the revised draft Baseline Human Health Risk Assessment for the Lower Passaic River Study Area (December, 2015) which reflects the incorporation of dispute resolution decisions and numerous United States Environmental Protection Agency (USEPA) comments (7/15/15) and response to the Cooperating Party Group's (CPG) comments (10/16/15). While the CPG accepted many of USEPA's requested changes, there are numerous comments that were not adequately addressed and will need further resolution.

An additional document, entitled Site-Specific Human Health Risk Assessment of LPRSA (August, 2014), has also been submitted for review. This document does not represent a site-specific risk assessment, but rather a thinly veiled attempt to undermine USEPA's existing risk assessment policy and current practices used in the development of the LPRSA baseline risk assessment. The secondary document includes unjustifiable Reasonable Maximum Exposure (RME) approaches (two fish diets with one representing the elimination of carp, ingestion of crab muscle only) and exposure factors [use of cooking loss, unapproved Creel/Angular Study (CAS) exposure parameters]—all in an effort to underestimate risk/hazard to an RME individual. The Department recommends that the USEPA reject the CPG's "site-specific" risk assessment as it is highly misleading and compromises the findings of the 17-mile LPRSA Baseline Human Health Risk Assessment (BHHRA) and the entire dispute resolution process.

## **II Specific Comments**

Several overarching issues must be resolved prior to finalization of this document. These issues are not new and have been previously brought to the attention of the CPG, but have not been adequately addressed. They include:

### **1. Inappropriate Use and Placement of Background Discussion throughout the Document:**

While USEPA agreed the CPG could discuss background sources of contamination in the Risk Characterization section of the document, the revised BHHRA includes extensive discussion of background sources of contamination throughout many sections of the document that should be removed. Specific examples where the document emphasizes background sources includes the Executive Summary (pages ES-3, ES-2.1, ES-12 and ES-14-15), Site Characterization (page 2-2), Data Evaluation (pages 3-8 and 3-11), Uncertainty Evaluation (page 7-47) and the Conclusion (page 8-10). Approximately nine pages of the Risk Characterization section discuss background sources (6-32 through 6-40). The Department recommends that this discussion should be limited to the information presented in 6.5.2.5., and the remainder (after editing) is placed in an appendix or removed entirely.

The excessive references to background throughout the document dilute the findings of the risk evaluation and should be removed from most of the document with some limited discussion (e.g. 6.5.2.5) allowed in the Risk Characterization section as recommended by USEPA.

### **2. Inappropriate and Unbalanced Presentation of Uncertainty:**

Throughout the 4.0 Exposure Assessment section, there is discussion of uncertainty or references to information in the uncertainty section (pages 4-16, 4-26, 4-27, 4-35, 4-36). This is inappropriate and should be reduced to one sentence in the opening paragraphs of the section.

The Uncertainty Evaluation section is very long (48 pages) and inclusive of potentially valid but secondary information. A meaningful uncertainty section should be a balanced appraisal of major uncertainties that will significantly affect the site-specific numerical risks as they relate to the selection of remedies. There are uncertainty issues that do not need to be included (practically the entire toxicity section) and other uncertainties that should be reduced in size to a paragraph. More important, many of the uncertainties are still unbalanced and conclude that they represent an "overestimate" of risk/hazard rather than a valid estimate based upon an RME. The Department recommends that the USEPA reduce the uncertainties to those that truly affect the major risks and ensure that these uncertainties are presented in a balanced manner.

### **3. Inappropriate Tone throughout Document:**

The written tone of the document is distinctly biased toward a belief that risk assessments are unreasonable and overly conservative, resulting in inflated risk estimates that do not accurately represent the site conditions or a reasonable maximum exposure. This inappropriate tone exaggerates the uncertainty of every aspect of risk assessment policy and highlights the conflicting interests of the responsible party.

Throughout the document, the CPG consistently refers to the BHHRA and USEPA recommended default exposure parameters as “excessively,” “very,” or “overly” conservative that “overestimates” risks associated with the LPRSA. This is particularly an issue in the Uncertainty section where for example, the CPG refers (page 7-12) to other sites where different fish ingestion rates were used indicating the rate used for the LPRSA is on the high end of the rates used for other sites. The CPG also emphasizes the use of “combined upper bound assumptions” in the document and that the very conservative nature of the potential risk estimated by the risk assessment process is not generally recognized (page 7-44). This biased tone and lack of balance in terms of the real objective to be “reasonably” conservative or protective in the evaluation of risk at the site needs to be critically reviewed throughout the document and most particularly in the Uncertainty Section to ensure that the text is more balanced.

Remove language throughout the risk assessment stating that “the parameters used in the BHHRA are those directed by the USEPA Region 2 for the CPG to use” (pages 4-9, 4-10, 4-14, 4-17). If this language is allowed to remain, additional language should include that the assumptions and parameters, etc., are those that are routinely used on sites by the Superfund Program and based on the best available science.

Any language discussing CPG disagreements with USEPA and reference to dispute resolution should be removed in footnotes (pages 4-10, 4-13, 4-14, 4-16, 4-20, 4-21, 5-1, 5-14, 6-1, 7-8) and throughout the document.

#### 4. Inappropriate Use of CPG’s Fish/Crab Survey:

It is important that Region II fully discuss their position on the CPG’s fish/crab survey and clearly define how this study will be used (if at all) in the BHHRA. Multiple areas of the document refer to the CAS study as site-specific for the LPRSA and maintain that the results of this recent survey provide evidence that the USEPA recommended default parameters used in the BHHRA are overly conservative for the river. On page 2-8, the document states that USEPA “declined to provide input to the survey...” and details the attributes of the study (peer review by expert panel), but fail to include the potential problems with the representativeness of the CAS study. On the contrary, the document goes into a substantial amount of detail questioning the default parameters and other surveys used as the basis of USEPA’s recommended exposure parameters (see section 7.2.1.2 for example). If the CAS study results are included in the document, it is recommended that a more balanced evaluation of the potential problems of the CAS study be included in the text and the Uncertainty section in particular.

In addition, the Department re-iterates that, given the longstanding ban<sup>1</sup> on consuming fish in the lower Passaic River, data collected as part of a “current” creel/angler survey are considered suspect as inherently unreliable (persons may be reluctant to admit illegal activity) and therefore may not be representative of actual activity. In addition, such data do not reflect fishing and consumption that should be occurring if contamination was not present.

### III Other Issues

#### 1. 1.0 Introduction, 2nd paragraph:

“Using the data and information from recent site-specific studies in the LPRSA” should be replaced with “recent and USEPA-reviewed.” If not rewritten as recommended, the use of the CAS survey may be considered appropriate for this project, when it is not.

## 2. Excluded elevated TCDD value:

Elimination of an elevated TCDD value in calculation of the surface water Exposure Point Concentration (EPC) on page 4-31 of the document has been performed, claiming it is an outlier. However, the document does not sufficiently clarify why this value was removed from the EPC calculation, nor is it addressed further in the risk assessment.

The Department cautions against CPG's actions for surface water EPC development in the BHHRA and requests that the USEPA's risk assessment group evaluate this situation. In short, based on other available surface water information (Section 6 and associated tables and figures), it is unclear why the one data point was removed when other elevated levels (June 2012) are also observed and, therefore, are likely representative of highly variable surface water quality conditions in the river.

In addition, per the February 18, 2014 Draft Small Volume Chemical Water Column Monitoring (CWCM) Report, text in Section 3 states: "Two extreme (high) concentrations of 2,3,7,8-TCDD were measured during the ebb tide at RM 6.7 (TTR1). These anomalous concentrations occurred during higher flows (1380 and 2630 cfs) of the Routine (tidal dependent) Events." These data are presented in Summary Statistic Tables 3-2 and Table 3-5, but excluded from Figure 3-12a.

Given the complex nature of the sediment-surface water interactions under tidal and freshwater flow conditions, removal of data points considered "excessively" high (and despite a statistical evaluation) may not be appropriate for this situation. It is also noted that relative to characterization of data for inclusion in the surface water EPC, the text in Section 4.4.4 (top of page 4-32) of December 2015 Draft BHHRA, states: "Based on this analysis and *the need to estimate chronic (average) exposure concentrations* in surface water, the maximum 2,3,7,8-TCDD result was removed from the surface water data set used to calculate the TCDD-TEQ EPC (USEPA 2002d)." (Emphasis added in italics)

The Department questions the validity of this action: both removal of a high concentration of 2,3,7,8-TCDD and the potential use of a more Central Tendency Exposure - like approach for this pathway. The Department realizes that this exposure pathway for human health is not a primary risk driver among site risks; however, the EPC for surface water should be appropriately represented using an RME approach.

## 3. Potential Risk/Hazard to Residents:

The Uncertainty Evaluation section (page 7-46) discusses potential risks to residents along the Passaic River in relation to an evaluation of recreational areas along the river that was conducted by USEPA. In addressing potential impacts to residents, the section discusses USEPA's sampling conducted in the above areas that included an evaluation of potential risks to the young child (1-6), the adolescent (7-18) and worker exposed to soils in the above areas. This evaluation indicated that the soil concentrations were below risk-based levels of concern. The BHHRA states that this evaluation by USEPA provides insight into potential impacts to other areas along the river, including residential backyards. The document indicates that it is reasonable to find similarly low levels along other floodplain locations along the LPRSA. This conclusion however is inappropriate since evaluation of potential exposure risks to recreational areas along the river is not interchangeable with potential risks to the individual living along the river who could be exposed to floodplain soils, river sediment and mudflat areas under a residential exposure scenario. The sampling conducted in the evaluation of the recreational areas also may not be representative of sampling data that is appropriate for use in evaluating residential exposure. The document should therefore be revised to adequately reflect this. As NJDEP has previously recommended,

an evaluation of potential risk to the resident along the river should be conducted at some point even if it is included in a separate operable unit.

4. Lead (5.5.5):

It should be noted in the text of Section 5.5.5 that the Center for Disease Control has recommended that the acceptable blood lead level of 10 ug/dL should be lowered to 5 ug/dL which is currently under review, not in a footnote.

5. Conclusions (8.2)

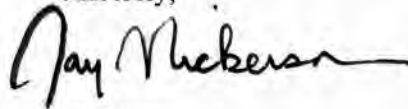
The conclusion should relate strictly to the RME and CTE findings. On page 8-8 (bullets 3 & 4), all verbiage discussing the "alternate fish diet excluding carp" and "crab muscle only diet" should be removed. Additionally, language related to background and uncertainty should be limited/removed.

<sup>1</sup> NJDEP Administrative Order No. EO40-19, August 6, 1984

Please incorporate these comments into the letter that the USEPA will be sending to CPG.

Thank you for your cooperation in this matter. If you have any questions, please call me at (609) 633-1448, or email at [Jay.Nickerson@dep.nj.gov](mailto:Jay.Nickerson@dep.nj.gov).

Sincerely,



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